Before the
Federal Communications Commission
Washington, DC 20554

In the Matter of	)	
	)	
Implementation of the Local Competition Provisions in the Telecommunications Act of 1996	)	CC Docket No. 96-98
	)	
Interconnection Between Local Exchange Carriers and Commercial Mobile Radio Service Providers	)	CC Docket No. 95-185

COMMENTS OF RCN TELECOM SERVICES, INC.

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SUMMARY

RCN Telecom Services, Inc. (ARCN≅) is one of the few competitive local exchange carriers (ACLECs≅) focusing on the residential market. RCN contributes to meeting the pro-competitive goals of the 1996 Act by seeking to provide to consumers a full range of local, long distance, video, Internet, and data services. This proceeding provides the Commission with an opportunity to assure, under the guidance provided by the Supreme Court=s decision in *AT&T v. Iowa Utilities Board* (A*Iowa Utilities Board*≅), that an appropriate range of network elements available as unbundled network elements (AUNEs≅) to promote competition in provision of residential services.

RCN believes that the Commission possesses broad discretion in crafting rules implementing incumbent local exchange carrier (AILEC≅) network unbundling obligations under the 1996 Act. RCN urges the Commission to exercise this discretion, while appropriately defining Anecessary≅ and Aimpair,≅ by reestablishing its initial approach to fashioning unbundling obligations while also supplementing that approach in light of the nearly three years experience gained since passage of the 1996 Act.

The Commission should establish a national list of minimum UNEs which all ILECs must make available to assist in reaching the 1996 Act=s goal of robust and irrevocable competition. The Commission should establish definitions of Anecessary≅ and Aimpair≅ based on the extent to which use of alternatives to ILEC network elements would materially adversely affect the ability of competitive providers to provide service in terms of cost, quality, ubiquity, and timeliness of service. The Commission should recognize that few, if any, ILEC network elements are proprietary ones to which the more stringent Anecessary≅ standard would be applicable.

The Commission should reestablish the initial seven UNEs identified in the *Local Competition Order*. In addition, based on its experience over the last three years, the Commission should identify additional UNEs that would strongly promote the ability of competitive LECs to provide competitive services to the residential market. A principal UNE in this regard is intra-building wiring. The Commission should additionally designate as UNEs: sub-loop elements, conditioned loops, the Aextended link,≅ dark fiber, and additional transport options.

The Commission should adjust the national list of minimum UNEs by periodic reviews based on industry developments. RCN does not believe that it is possible to know in advance when any network elements should be removed from the list. Accordingly, the Commission should not establish sunset dates.

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I. INTRODUCTION

RCN Telecom Services, Inc., and its affiliates (ARCN≅), by its undersigned counsel and pursuant to the Commission=s Second Further Notice of Proposed Rulemaking (A*UNE NPRM*≅), respectfully submit these Comments in the above-captioned proceeding.[1] RCN is a provider of local and long distance telephone, video and Internet access services, primarily oriented toward the residential market. As such, RCN has a substantial interest in ensuring that the Commission successfully implements the network element unbundling obligations established in Section 251 of the Communications Act (AAct≅ or A1996 Act≅).[2] RCN urges the Commission to implement incumbent LEC (AILEC≅) unbundling obligations under the Act in ways that will assure the ability

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[1] *Implementation of the Local Competition Provisions in the Telecommunications Act of 1996, Interconnection between Local Exchange Carriers and Commercial Mobile Radio Service Providers*, CC Docket Nos. 96-98 & 95-185, Second Further Notice of Proposed Rulemaking, DA 99-70 (rel. April 16, 1999) (A*UNE NPRM*≅).

[2] Telecommunications Act of 1996, Pub. L. No. 104-104, 110 Stat. 56, (1996)

of competitive LECs (ACLECs≅) focusing on the residential market to provide service. The Commission should reestablish the list of unbundled network elements (AUNEs≅) it adopted in it *Local Competition Order*[3] as well as add new elements to that list.

II. THE COMMISSION HAS CONSIDERABLE DISCRETION IN IDENTIFYING WHICH NETWORK ELEMENTS MUST BE UNBUNDLED

In vacating the UNE rules established in the *Local Competition Order*, the Supreme Court held that Section 251(d)(2) of the 1996 Act requires the Commission to determine which network elements must be unbundled, considering both the objectives of the Act and the standards set forth in Section 251(d)(2).[4] The only guidance provided by the Supreme Court to aid the Commission in re-evaluating the UNE rules was that it must consider the availability of elements outside the ILECs= networks and must give some substance to the Anecessary≅ and Aimpair≅ requirements of Section

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(codified at 47 U.S.C. ∋251) (A1996 Act≅).

[3] *Implementation of the Local Competition Provisions of the Telecommunications Act of 1996*, CC Docket No. 96-98, First Report and Order, 11 FCC Rcd 15499 (rel. August 8, 1996) (A*Local Competition Order*≅).

[4] *AT&T Corp. v. Iowa Utilities Board*, 119 S.Ct. 721 (1999) (A*Iowa Utilities Board*≅).

251(d)(2).[5] The Court further indicated that the Commission need only have a rational basis for determining that a given network element must be unbundled pursuant to the objectives and standards set forward in the 1996 Act.[6]

[5] *Iowa Utilities Board*, 119 S.Ct. at 736.

[6] *See id.* (A[Section 251(d)(2)] requires the Commission to determine on a rational basis which network elements must be made available . . . . A); *see also Chevron v. NRDC*, 467 U.S. 837, 866 (1984) (A*Chevron*≅).

RCN submits that the Commission has a great deal of discretion under the Supreme Court=s decision in determining which network elements must be unbundled. To the extent that Congress has not expressed itself directly on the proper interpretation of Section 251(d)(2), the Commission has the authority to do so provided that it does not act in an arbitrary or capricious manner.[7] The terms Anecessary≅ and Aimpair≅ are not defined in either the 1996 Act or in its legislative history.[8] Furthermore, neither the statute itself nor its legislative history suggest that Congress intended to narrow the factors that the Commission may consider when assessing which UNEs should be made available to competitors. Taking these considerations into account, RCN believes the Commission has considerable discretion in developing an approach that will best implement the goals of the 1996 Act.

III. THE COMMISSION MUST ESTABLISH A LIST OF UNES TO BE UNBUNDLED NATIONWIDE

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[7] *Chevron*, 437 U.S. at 842-43.

[8] *See Iowa Utilities Board*, 119 S.Ct. at 734-36; *see, e.g.*, H. Conf. Rep. No. 104-458, 104th Cong., 2nd Sess. 122 (1996) (AJoint Explanatory Statement≅).

In the *Local Competition Order* the Commission reasoned that the pro-competitive goals of the 1996 Act would be best achieved if it established a national minimum list of UNEs that ILECs must make available.[9] The Commission found that establishing national requirements would permit new entrants to better take advantage of economies of scale, reduce the administrative burdens on new carriers and on the states, reduce the likelihood of litigation of state-specific rules, and provide some certainty in the cost of entry and thereby enhance the ability of new entrants to raise capital.[10] In the *UNE NPRM*, the Commission tentatively concluded that it should continue to identify a nationwide minimum set of UNEs.[11]

The reasoning the Commission applied in the 1996 *Local Competition Order* is still valid. While many new facilities-based entrants, including RCN, are either offering, or are on their way to offering facilities based-local service, the ILECs still dominate the local telephone marketplace. Additionally, new entrants have established and implemented business plans and entry strategies based on access to UNEs.

To the extent that creating a nationwide minimum list of UNEs was found to best promote future entry into the local markets in the *Local Competition Order*, to change this policy at this point would have an immediate and potentially catastrophic impact on the CLECs= efforts to enter local markets. For example, permitting each state to establish minimum standards for UNEs would not only create the significant administrative burdens foreseen by the Commission in the *Local*

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9 *Local Competition Order*, 11 FCC Rcd 15499 at && 231, 241.

10 *Id*. at & 242; *see also UNE NPRM* at & 13.

11 *UNE NPRM* at & 14.

Competition Order, but it would further delay the completion and expansion of existing CLEC networks. New state UNE proceedings would have to be instituted and existing interconnection agreements would be cast into doubt.

Therefore, RCN urges the Commission to reestablish a national minimum list UNEs. Neither technical nor market conditions vary between states to the extent that the need for state-specific minimum UNE standards would outweigh the burden placed upon competition by a mosaic of UNE requirements. The Commission can afford states sufficient flexibility to address local circumstances by permitting them to supplement the Commission=s list of UNEs pursuant to federal guidelines. However, the Commission should not permit states to remove any federally mandated UNEs from the list of those that must be unbundled as it suggests in the *UNE NPRM*.[12] This could lead to conflicting access standards which could increase the cost of entry as discussed above.

IV. THE COMMISSION SHOULD NOT EMPLOY THE ESSENTIAL FACILITIES DOCTRINE WHEN DETERMINING WHICH ELEMENTS MUST BE UNBUNDLED

The Commission asked for comment on the essential facility doctrine and the role it should play in identifying network elements that must be unbundled.[13] The essential facilities doctrine is a judicially created doctrine of antitrust law. Its roots can be traced back to the Supreme Court=s 1912 decision in *United States v. Terminal Railroad Association*, and has been developed and refined in a long line of subsequent decisions.[14] Though well established, the doctrine has been severely

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[12] *See id.* at & 14.

[13] *Id.* at & 22.

[14] *United States v. Terminal Railroad Association*, 224 U.S. 383 (1912); *see, e.g.*, *MCI Communications Corp. v. AT&T*, 708 F.2d 1081, 1132-33 (7th Cir. 1982) (reviewing modern cases).

criticized by some of today=s leading antitrust scholars.[15] RCN believes that the essential facilities doctrine, while superficially relevant to the issue at hand and a convenient reference for purposes of judicial review, is not well suited for application in the present instance and should not be applied by the Commission here.

[15] *See* IIIA Areeda and Hovenkamp, *Antitrust Law* & 771c (1996) (AAreeda and Hovenkamp≅) (ALest there be any doubt, we state our belief that the >essential facility= doctrine is both harmful and unnecessary and should be abandoned.≅).

RCN believes that application of the essential facilities doctrine would be inconsistent with the 1996 Act. In the first instance, the legislative history of the 1996 Act indicates that Congress intended to free the Commission from the bounds of judicially established policies.[16] There is nothing in the legislative history that indicates that Congress intended the Commission to employ this doctrine when determining what network elements must be unbundled. Section 251(d)(2) itself uses a Anecessary≅ standard for the unbundling of proprietary elements and an Aimpairment≅ standard for other elements. As a grammatical matter, the word Anecessary≅ might be read as equivalent to Aessential,≅ although the term Anecessary≅ frequently is regarded as a weaker term.[17] But regardless of this distinction, the question remains why Congress did not use the term Aessential facilities≅ if it intended to incorporate a specific judicial doctrine carrying that name.

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[16] *See* 141 Cong. Rec. S 7889-01 (June 7, 1995) (Sen. Pressler) (the 1996 legislation was intended to Aterminate the involvement of the Justice Department and the Federal courts in the making of national telecommunications policy≅).

[17] For example, one definition of Aessential≅ is A*absolutely* necessary; indispensable≅ (emphasis added). *Random House Unabridged Dictionary* 487 (1981).

As for the Aimpairment≅ standard established by section 251(d)(2)(B), it cannot be reconciled, even on a strictly grammatical basis, with the Aessential facilities≅ doctrine. The essential facilities doctrine requires a showing that the facility is Aessential to the plaintiff=s survival in the market≅ and is Anot available from another source or capable of being duplicated by the plaintiff or others.≅[18] By contrast, the dictionary definition of Aimpair≅ is Ato make, or cause to become, worse; diminish in value, excellence, etc.; weaken or damage.≅[19] If a facility is Aessential to survival in the market≅ and is Anot available from another source or capable of being duplicated,≅ as set forth in the essential facilities doctrine, then denial of access does not merely Aweaken or damage≅ a competitor=s ability to compete, rather it *destroys* its ability to compete. Thus a mere showing of Aimpairment≅ cannot be reconciled with employment of the essential facilities doctrine; and to read the Aessential facilities≅ doctrine into the Aimpairment≅ standard would be a distortion of the statutory language.

Furthermore, the essential facilities doctrine is fundamentally at odds with one of the basic premises of the 1996 Act, which was that there would be a variety of competitive entry strategies.[20] As discussed above, the essential facilities doctrine requires that the facility be Aessential to the plaintiff=s survival in the market≅ and Anot available from another source or capable of being

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[18] Areeda and Hovenkamp at & 773b.

[19] *Random House Unabridged Dictionary* 713.

[20] *See Local Competition Order* at & 12.

duplicated by the plaintiff or others.≅[21] Thus the doctrine is confined to situations in which the *only* feasible competitive entry strategy is to use the Aessential≅ facility. As soon as it is admitted that there are a variety of feasible strategies, some of which may not require use of the facility, then the facility is not Aessential≅ and the doctrine does not apply.[22] Accordingly, if the essential facilities doctrine were to be employed as a measure of the unbundling obligation, unbundling would never be required where a variety of entry strategies are feasible. Thus, because Congress assumed competitive entry through unbundled elements would be only one of a variety of entry strategies under the Act, Congress could not have intended the essential facilities doctrine to apply to ILEC unbundling obligations.[23]

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[21] Areeda and Hovenkamp at & 773b.

[22] *MCI Communications Corp. v. AT&T*, 708 F.2d at 1132-33.

[23] *See Local Competition Order* at & 12.

Another indication of the inapplicability of the essential facilities doctrine is that in the 1996 Act Amany practices in the nature of refusals to deal are simply forbidden,≅ without the need for a case-by-case showing of market power and anti-competitive effects that would otherwise be required by section two of the Sherman Act in the absence of a showing of concerted action.[24] Accordingly, Professors Areeda and Hovenkamp correctly conclude that Athe obligations created under the Telecommunications Act itself are significantly broader than those created under Sherman Section 2.≅[25]

V. ANALYSIS UNDER SECTION 251(D)

The Commission requested comment on the correct construction of Section 251(d) to aid it in determining how to apply the necessary and impair standards.[26] The structure of Section 251(d)(2) requires the Commission to determine whether proprietary network elements are Anecessary≅ and whether the lack of access to non-proprietary elements would Aimpair≅ a CLEC=s ability to compete. Thus, Anecessary≅ only applies to proprietary network elements. This interpretation has been accepted by the Commission, by the Eighth Circuit, and by the Supreme Court.[27] RCN believes this is the only sound interpretation of this section and that the Commission should continue to employ it.[28]

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[24] Areeda and Hovenkamp at & 785b, p. 277.

[25] *Id*.

[26] *See UNE NPRM* at && 18, 29.

[27] *See id.* at & 19.

[28] An alternative, though strained reading of Section 251(d)(2) is possible in which

Asuch network elements≅ in (d)(2)(B) is interpreted as relating to Aproprietary network elements≅ contained in Section (d)(2)(A). In this alternative reading both Sections 251(d)(2)(A) and (B) would apply only to Aproprietary≅ network elements. This would create a two pronged analysis for determining if a proprietary network element must be made available. RCN believes that this is not the best reading of the statute because it renders the term Anecessary≅ meaningless. This is because the lack of any element that is Anecessary≅ would also Aimpair≅ a competitor=s ability to provide service. Thus, under this reading there is no purpose in considering the Anecessary≅ portion of the analysis because the less stringent Aimpair≅ prong would always be outcome determinative. This is clearly not what Congress had in mind when it drafted the 1996 Act. Rather, Asuch network elements≅ in Section (d)(2)(B) is best read as relating to the network elements to be unbundled under Section 251(c)(3) pursuant to Section (d)(2).

A. Effect of the TermAProprietary≅

By including the term Aproprietary≅ in Section 251(d)(2)(A) Congress created an additional standard for unbundling to be applied only to those network elements which ILECs claim are proprietary.[29] There is nothing in the statute or legislative history to suggest that Congress intended that the Commission give Aproprietary≅ an expansive interpretation. RCN therefore believes that while the Commission must give effect to the term Aproprietary,≅ it should adopt a narrow reading of that term.

[29] There are several instances in the Telecommunication Act in which Congress included language designed to grant special protections for proprietary information. *See, e.g.*, 47 C.F.R. ээ 222, 272(d)(3)(C).

RCN believes that the Commission should recapitulate and extend the reasoning it adopted in the *Local Competition Order*.[30] The Commission originally concluded that network elements that adhere to Bellcore standards rather than ILEC-specific protocols were not proprietary.[31] Nothing has changed in the ensuing period since the Commission first adopted these conclusions to warrant reaching a different conclusion at this time. In fact, RCN submits that the Commission should extend this rationale to cover all items whose standards are defined by industry-wide standard setting bodies or are otherwise widely available.

Furthermore, RCN believes that narrowly construing this term to apply only to materials subject to the protections of the intellectual property laws, as suggested by the Commission, would greatly simplify application of the proprietary standard.[32] Additionally, RCN believes that a network element should only be considered proprietary for purposes of Section 251(d)(2)(A) if permitting access to it would compromise the security of the specific proprietary material. If access to the proprietary element would not involve disclosure of any proprietary information, then access to the element should be governed by Section 251(d)(2)(B).

RCN also submits that none of the original seven UNEs or the additional UNEs suggested below should be considered proprietary under any reasonable standard.

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30 *See Local Competition Order* at & 481; *UNE NPRM* at & 15.

31 *See UNE NPRM* at & 15.

32 *Id.*

B. ANecessary≅ and AImpair≅ Standards

In the *Iowa Utilities Board* decision, the Supreme Court ruled that the Commission did not apply Section 251(d)(2)=s necessary and impair standards in a reasonable manner.[33] Specifically, the Supreme Court held that application of these standards requires taking into consideration the availability of elements outside the ILEC=s networks.[34] The Commission now seeks comment on the proper application of the terms Anecessary≅ and Aimpair.≅[35] The pro-competitive goals of the statute should serve as the guiding principle in defining and applying both the necessary and impair standards. Furthermore, the limiting standard envisioned by the Supreme Court in interpreting Anecessary≅ and Aimpair≅ should incorporate a number of factors relating to the availability of non-ILEC network elements based on cost, quality, ubiquity, and timeliness of availability.

1. ANecessary≅

Application of the Anecessary≅ standard set forth in Section 251(d)(2)(A) requires that the Commission first establish that an element is proprietary, as discussed above. The Commission must then consider whether the proprietary element is Anecessary≅ for the provision of service. In determining whether the element is Anecessary,≅ RCN believes the Commission should assess whether the absence of the proprietary network element would render provision of service commercially impracticable. This can be achieved by examining various factors relevant to the ability of CLECs to provide competitive services. These factors should include: the availability, cost and

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33 *Id.*

34 *Id.*

35 *Id*. at && 16-21.

quality of elements outside the incumbent=s network (including self provisioning), and the time required for provision of alternatives. RCN believes that the Commission should not give any pre-established weight to these factors, but rather should consider how the totality of the circumstances, as evidenced by the factors considered, indicates that requiring unbundling of the network element would promote the pro-competitive purpose of the 1996 Act. This would best give effect to the goals in Section 251 of promoting competition and protecting proprietary material. It would also comport with the Supreme Court=s *Iowa Utilities Board* decision.

2. AImpair≅

In considering whether to afford access to non-proprietary network elements, the Commission must determine whether the failure to provide access to a network element would impair the provision of competitive services. The Supreme Court ruled that the Commission=s interpretation of Aimpairment≅ under Section 251(d)(2)(B) as meaning any decrease in quality or any increase in cost did not sufficiently distinguish between those elements that must be unbundled and those that must not.[36] RCN believes that compliance with the Supreme Court=s ruling can be accomplished by applying the Aimpair≅ standard with a focus on the materiality of the impairment. Thus, in analyzing whether a network element meets the impair standard, the Commission should consider factors relevant to the ability of CLECs to provide competitive services, similar to those considered under the necessary standard discussed above but without having to take into consideration factors relating to protection of the proprietary network elements. These factors should include: availability, cost and

[36] *Iowa Utilities Board*, 119 S.Ct. at 735.

quality of elements outside the incumbent=s network (including self provisioning), and the time required for provision of alternatives.

As with the analysis under the necessary standard, RCN believes that the Commission should not give any pre-established weight to these factors, but rather should determine how the totality of the circumstances, as evidenced by the factors considered, indicates that requiring unbundling of the network element would promote the pro-competitive purpose of the 1996 Act. In determining whether the magnitude of any of these factors, individually or collectively, is material, the Commission should consider the extent to which the factors indicate that lack of access to the network facility would hinder the pro-competitive purpose of the Act. RCN believes that this approach is both workable as a practical matter and legally sufficient to meet the rational basis standard the Supreme Court employed in its reasoning in *Iowa Utilities Board*.[37]

VI. THE COMMISSION SHOULD REESTABLISH EXISTING UNEs AND CREATE ADDITIONAL UNEs

A. The Commission Should Reestablish The Original Seven Minimum UNEs

[37] *See Iowa Utilities Board*, 119 S.Ct. at 736; *see Chevron*, 467 U.S. at 865-66.

The Supreme Court=s decision in *Iowa Utilities Board* does not preclude the Commission from reestablishing the seven original minimum UNEs. These are: the local loop, the network interface device (ANID≅), switching capability, interoffice transmission facilities, signaling networks and call-related databases, operations support systems functions, and operator services and directory assistance.[38] The Supreme Court did not individually examine the specific minimum UNEs identified by the Commission in Rule 319. Rather, the Court only found that, in examining what network elements should be designated as UNEs, the Commission must Atake into account the objectives of the Act and give some substance to the >necessary= and >impair= requirements≅ as directed by the Court.[39] RCN believes that alternatives available from sources independent of the ILEC for each of the seven original UNEs would involve materially higher costs, lower quality, less ubiquity, and/or longer delays in obtaining them. Therefore, unavailability of these network elements as UNEs would impair CLECs= ability to provide service and they should be designated as UNEs. If no grandfathering takes place, some CLECs may be forced to cease service in some areas, adversely impacting customers in a direct manner.

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[38] 47 C.F.R. ∋ 51.319 (1998); *Local Competition Order* at && 366-540.

[39] *Iowa Utilities Board*, 119 S.Ct. at 736.

Further, reestablishing several of the original UNEs is mandated by the structure of the Act itself. Under the Act, Congress required BOCs seeking in-region interLATA authority to unbundle the network elements set forth in the competitive checklist of section 271(c)(2)(B). RCN submits that Congress= inclusion of these elements in the competitive checklist establishes a presumption that, at a minimum, these network elements are subject to the unbundling obligation of section 251(c)(3).[40] Accordingly, the network elements set forth in the competitive checklist should be retained as UNEs in this proceeding.

Eliminating any of the seven original UNEs would also significantly disrupt the business plans of most new entrants, and jeopardize their ability to provide and expand service. If the Commission were to decide that some of the seven original UNEs do not meet the Aimpair≅ standard, it should permanently grandfather any existing use of these UNEs to avoid disrupting provision of competitive services.

The factors cited by the Commission in the *Local Competition Order* in support of ILEC unbundling of the original seven network elements apply with equal force three years later and satisfy the Aimpair≅ standard. As demonstrated below, the factors cited by the Commission show that without unbundled access to each of the seven original network elements new entrants could not, as a matter of practicality and economics, provide service at the same price, quality, or in the same time

[40] In order to obtain authority to provide long distance service, the competitive checklist requires BOCs to demonstrate, among other things, that they are providing the following network elements to their competitors on an unbundled basis: local loops, transport, switching, databases, and signaling. 47 U.S.C. ə 271(c)(2)(B).

frame or with the same ubiquity as the ILEC, resulting in an impairment of their ability to provide services.

1. Local Loops Are A Crucial Bottleneck Facility That Must Be Unbundled

RCN strongly supports the Commission=s assessment that Aunder any reasonable interpretation of the >necessary= and >impair= standards,≅ local loops should be subject to the unbundling obligation.[41] The local loop was specifically identified by Congress in the competitive checklist as a network element that must be unbundled.[42] Further, the ILEC=s local loop network is a bottleneck facility that is prohibitively expensive to duplicate and that creates a formidable barrier to entry. This barrier to entry is the legacy of the ILEC=s monopolistic practices and longstanding legal prohibitions against competitive entry into the local service market that were removed by the 1996 Act.

At present, local loops are by far the most commonly used UNE. As previously found by the Commission, without access to local loops new entrants would need to invest immediately in duplicative facilities to compete for customers thereby misallocating scarce societal resources and reducing aggregate consumer welfare.[43] Additionally, without access to unbundled local loops new entrants would need to make a large initial sunk investment in loop facilities before they had a customer base large enough to justify the expenditure thereby delaying market entry, increasing the financial risk of entry, and impeding the pro-competitive goals of the Act. By contrast, the ability of

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41 *UNE NPRM* at & 32.

42 *Local Competition Order* at & 377.

43 *Id.* at & 378.

a new entrant to purchase unbundled loops from the ILEC allows the entrant to build facilities gradually, and to deploy loops where it can do so without impairing generally its ability to provide service.

The Commission should broadly define the local loops subject to the unbundling obligation in order to assure the viability of a variety of market entry strategies, and to facilitate the rapid deployment of advanced broadband services. At a minimum, the Commission should require the unbundling of: 2-wire voice grade analog loops, 2-wire Integrated Services Digital Network (AISDN≅) lines, 4-wire DS-1 lines, and 2-wire and 4-wire loops that are conditioned to transmit digital signals in order to provide advanced broadband services.

2. Local And Tandem Switching Must Be Designated A UNE

The Commission should designate local switching as a UNE. Congress identified local switching capability as a UNE in the competitive checklist, and, as an example of the kind of network element that would subject to unbundling under Section 251(c)(2). More importantly, denying access to a local switching element would materially impair the ability of many new entrants to offer local services. It is infeasible for new entrants to duplicate even a small percentage of the approximately 23,000 central office switches in the national telephone network due to the prohibitive investment required and the nine month to two year lead time needed to install a single switch.[44] Requiring the unbundling of local switching capability promotes local competition by enabling new entrants to amass a sufficient customer base prior to investing in a costly switch.[45]

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[44] *Local Competition Order* at & 411.

[45] A single modern digital switch may cost over $5 million. Henk Brands and Evan T. Leo, The Law and Regulation of Telecommunications Carriers 34 (1999).

RCN urges the Commission to define the local switching element for unbundling purposes to include the functionality of connecting lines and trunks, all vertical features, customized routing and the same basic functions available to ILEC customers including but not limited to telephone number, directory listing, dial tone, signaling, and access to 911. This local switching definition is consistent with the Act=s definition of network element which includes all the Afeatures, functions, and capabilities provided by means of such . . . equipment.[46]≅

The Commission should also designate tandem switching as a UNE. It is not possible as an economic and practical matter for CLECs in most situations to deploy tandem switches, or obtain tandem switching from sources other than the ILEC. Also, due to the nine month to two year lead time required to install a switch, CLECs will be impaired in their ability to provide services absent the availability of tandem switching as a UNE. As found by the Commission earlier, the ability of CLECs to provide telecommunications service would also be impaired absent unbundling of tandem switching because tandem switching provides new entrants the ability to deploy their own interoffice facilities and connect them to the ILEC=s tandem switches where it is efficient to do so.[47]

3. Interoffice Transmission Facilities Must Be Designated A UNE

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[46] 47 U.S.C. э 153(29).

[47] *Local Competition Order* at & 425.

The Commission should designate interoffice transmission facilities as a UNE. Congress identified transport capability as a UNE in the competitive checklist.[48] More importantly, absent unbundling, new entrants would be forced to construct all their own facilities or obtain interoffice facilities from third parties. It is RCN=s experience that these alternatives are not available with the same ubiquity or at a comparable cost to ILEC transport offerings. Accordingly, the unavailability of interoffice facilities as UNEs would impair CLECs= ability to provide service.[49] RCN submits that unbundled access to shared and dedicated transmission facilities would also reduce barriers to entry by enabling new entrants to construct efficient networks by combining their own interoffice facilities with those of the ILEC.

4. Databases And Signaling Systems Must Be Designated UNEs

The Commission should designate signaling systems and databases as UNEs. These are also in the competitive checklist.[50] Further, a competitor=s ability to provide service would be significantly impaired if it did not have unbundled access to the ILEC=s call-related databases, because alternatives to ILEC signaling systems, such as in-band signaling, would provide a lower quality of service.[51] Unbundled access to service management systems (ASMS≅) is also essential because SMS enable competitors to create, modify, or update information in call-related databases. Without the capabilities provided by the SMS competitors could not effectively use call-related

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48 47 U.S.C. э 271(c)(2)(B).

49 *Local Competition Order* at & 440.

50 *Id.* at & 479.

51 *Id.* at & 482.

databases and their ability to provide telecommunications services would be impaired.[52] The Commission should require access to Line Information Database (ALIDB≅), Toll Free Calling database, and AIN database for the purpose of switch query and database response through the SS7 network.[53]

5. Real Time Access To OSS Is Required To Render Quality Services

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[52] *Id*. at && 493, 499.

[53] *Id.* at & 491.

Timely access to information maintained in Operations Support Systems (AOSS≅) is critical to the ability of competing carriers to provide the same quality of services as ILECs. Without access to, *inter alia*, service interval information, and maintenance histories, competing carriers are at a significant disadvantage in performing the functions of pre-ordering, ordering, provisioning, maintenance, repair and billing to the satisfaction of their customers.[54] OSS determines the speed and efficiency with which a carrier can market, order, provision, and maintain services and facilities. ILECs should be required to provide competitors with unbundled access to OSS, and real time electronic interfaces to the underlying information in order to ensure new entrants can offer the same quality of services as ILECs.[55]

6. Network Interface Devices (ANID≅) Must Be Designated A UNE

The NID is the point of interconnection to the customer=s inside wiring. When a competitor deploys it own loops, the competitor must be able to connect its loops to customers= inside wiring, especially in multi-unit buildings, in order to provide service.[56] Permitting facilities-based competitors to connect their loops to the ILEC=s NID is the most efficient method of loop deployment. Without unbundled access to the NID, new entrants would be significantly impaired in their ability to provide competing services by deploying their own loops.

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[54] *Id.* at & 518.

[55] *Id.* at & 516.

7. Operator Services and Directory Assistance Services Must Be Designated UNEs

[56] *Id*. at & 392.

Unbundling of operator services and directory assistance is consistent with the intent of Congress as evidenced by the fact that the Act requires all LECs to permit non-discriminatory access to both operator services and directory assistance under section 251(b)(3), and the competitive checklist requires ILECs to provide nondiscriminatory access to directory assistance services and call completion services as a precondition for authorization to provide in-region interLATA services. The directory assistance database must be unbundled in order to permit the new entrant to provide operator services and directory assistance concerning ILEC customers.[57] ILECs should also be required to rebrand operator services and directory assistance services upon request. Without unbundled access to operator services and directory assistance, CLECs will not be able to meet customer expectations and their ability to provide services will be significantly impaired.

B. New UNEs Should Be Established To Promote Deployment of Advanced Broadband Services And Facilitate Competition In the Residential Market

This proceeding presents an opportunity for the Commission to examine the need for new network elements to be designated as UNEs based on its three years of experience in implementation of the Act. Because competition is not yet fully developed, especially in the residential market, the Commission should establish additional UNEs that could facilitate residential competition. Additionally, one of the fundamental goals of the Act is to promote innovation and stimulate widespread deployment of advanced broadband services.[58] The ability of new entrants to provide

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[57] *Id*. at 538.

[58] Joint Statement of Managers, S. Conf. Rep. No. 104-230, 104th Cong. 2d Sess. 1 (1996) (*AJoint Explanatory Statement≅); Deployment of Wireline Services Offering Advanced Telecommunications Capability*, CC Docket No. 98-147, First Report and Order and Further Notice of Proposed Rulemaking, FCC 99-48, -- FCC Rcd -- , at & 3 (rel. March 31, 1999) (A*Collocation Order*≅).

advanced broadband services will be materially impaired absent availability of the UNEs discussed below. Unbundling of the following non-proprietary network elements is crucial to promote residential competition and the rapid and widespread deployment of advanced broadband services.

1. Intra-Building Wiring Should Be Designated A UNE

Intra-building wiring is effectively the Afirst one hundred feet≅ of the local loop extending from the customer to the central office. Over the last decade the Commission has taken significant steps to increase the ability of customers and competitive providers of services to install new, and reconfigure existing, customer premises wiring.[59] However, the Commission=s inside wiring programs do not address situations where it is not practical or economical for CLECs to reconfigure or install new customer premises wiring. Thus, in most customer installations, especially in multi-unit dwellings, CLECs will not be able to provide service if they must essentially rewire the building in whole or in part in order to provide service. Nor would this make any sense if existing wiring is suitable for provision of services. In addition, premises owners and tenants are not likely to tolerate,

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[59] *Review of Sections 68.104 and 68.213 of the Commission=s Rules Concerning Competition of Simple Inside Wiring to the Telephone Network and Petition for Modification of Section 68-213 of the Commission=s Rules filed by the Electronic Industries Association,* CC Docket No. 88-57, Report and Order and Further Notice of Proposed Rulemaking, 5 FCC Rcd 4686 (rel. June 14, 1990) (A*Common Carrier Wiring Order*≅); *Review of Sections 68.104 and 68.213 of the Commission=s Rules Concerning Connection of Simple Inside Wiring to the Telephone Network*, CC Docket No. 88-57, Order on Reconsideration, Second Report and Order and Second Further Notice of Proposed Rulemaking, 12 FCC Rcd 11897 (rel. June 17, 1997) (A*Common Carrier Wiring Reconsideration Order*≅).

or pay for, unnecessary wiring alterations and installations. Instead, CLECs must have the ability to access and use customer premises wiring in order to be able to provide service.

RCN emphasizes that one of the key roadblocks it faces in seeking to provide services to residential customers is inadequate building access. RCN=s ability to obtain adequate access to intra-building wiring, including in situations where this wiring is owned by the ILEC, substantially and materially hinders RCN=s ability to provide service. RCN, therefore, strongly urges the Commission to designate customer premises wiring as a UNE.

The Commission should designate premises and building entrance facilities such as junction and utility boxes, house and riser cable, and horizontal distribution plant as UNEs. This would assure CLECs are able to access the portions of customer premises wiring as are necessary to provide service.

2. Unbundling Of Sub-Loop Elements Is Necessary To Permit Deployment Of Advanced Broadband Services

Access to sub-loop elements is necessary in order to bypass parts of the loop that are unsuitable for provision of some advanced services. For example, about 15% of potential customers are served through the use of loop carrier systems in the local loop which can make it impracticable to provide advanced broadband services.[60] Loop carrier systems aggregate and multiplex loop traffic at a remote concentration point and deliver it to the central office via a single high-speed connection.[61] Because there is no continuous circuit from the customer to the Central Office deployment of broadband services is impractical absent sub-loop unbundling. Additionally, some

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[60] Joan Engebretson, *The Great Wait*, Telephony, Jan. 4, 1999, at 26 (AEngebretson≅).

[61] *Local Competition Order* at & 383.

broadband technologies require relatively short loop lengths (often less than 18,000 feet).[62] New entrants utilizing these technologies need access to the local loop at points closer to the end user.[63] Sub-loop unbundling can provide access to shorter loop lengths, thereby permitting offering of advanced broadband services which would not otherwise be possible.

As with the loop generally, there is no economical or practical alternative to access to ILEC sub-loop elements.[64] Thus, unavailability of sub-loop elements would significantly impair new entrants= ability to provide advanced broadband services. The Commission should require ILECs to provide unbundled access to sub-loop elements, including drops, and portions of distribution plant that can be accessed by means of interconnection at remote pedestals, vaults, and outside or underground chambers where loops are currently accessed by ILECs.

3. ILECs Must Be Required To Condition Loops In Order To Facilitate Rapid Deployment Of Advances Broadband Services

RCN concurs with the Commission=s observation that there is nothing in the Act or in the Supreme Court=s *Iowa Utilities* opinion that would preclude the Commission from requiring ILECs to condition unbundled loops to facilitate the deployment of advanced broadband services.[65] Many technologies used to provide advanced broadband services require access to loops free of bridge taps

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62 A. Michael Noll, Introduction to Telephones and Telephone Systems 261 (1998) (≅Noll≅).

63 *Local Competition Order* at & 390.

64 Wireless local loops have not been widely deployed.

65 *UNE NPRM* at & 32.

and load coils (*i.e.*, conditioned). A new entrant=s ability to provide advanced broadband services will be substantially impaired unless ILECs are required to provide conditioned loops.[66]

[66] *Local Competition Order* at && 380-381.

4. Unbundling Of Extended Links Will Foster Further Competition In The Residential Market

An extended link consists of three components - a loop, multiplexing, and interoffice transport - combined as one network element.[67] A new entrants= ability to provide services, especially residential service, will be significantly impaired without access to extended links because it is not economically feasible[68] to collocate in all ILEC central offices, particularly those in outlying areas of lower population density. Requiring the unbundling of extended links would also facilitate the rapid extension of facilities-based competition into less densely populated areas and to residential customers by enabling a new entrant to reach more customers through a single collocation space. RCN has targeted such residential customers in its business plan and would benefit from unbundling of extended links. Unbundling of extended links could also alleviate the scarcity of collocation space in the leading markets that often inhibits market entry.

5. Dark Fiber Should Be Designated A Transport Facility Subject To Unbundling

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[67] The extended link may also be commonly referred to as the Aenhanced extended link.≅

[68] In the past, collocation in a single Central Office has cost competitive carriers as much as $500,000. Engebretson at 22.

Dark fiber is Afiber-optic cable that has been laid into a telecommunication=s provider=s network but which is not >lit= by electronics on either end of the cable,≅ or at least not lit by electronics provided by the owner of the cable.[69] Fiber cable is the premier telecommunications transmission facility combining low cost, high capacity, and efficiency.[70] It is not economically feasible for most competitive carriers entering the market to self-provision dark fiber. Moreover, new entrants have been unable to obtain the capacity of dark fiber in practical increments. Accordingly, the unavailability of dark fiber from ILECs stymies competition and continues to impair the ability of new entrants to provide services.

Broader availability of fiber transmission facilities, including dark fiber, would also substantially promote competition in local services. Accordingly, dark fiber should be included within the Commission=s definition of transport facilities subject to the unbundling obligation. Unbundling of dark fiber would not raise network compatibility or reliability issues so long as the Commission requires the electronics used to lite the fiber to conform to New Equipment Building Standards (ANEBS≅) Level 1 requirements as it has adopted in the *Collocation Order*.[71]

6. Other Transport Facilities Should Be Designated UNEs

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[69] *MCI Telecommunications Corp. v. Bellsouth Telecommunications, Inc.*, 7 F.Supp.2d 674, 679 (E.D.N.C. 1998) (Adark fiber falls clearly within the definition of a network element≅).

[70] Noll at 112-115.

[71] *Collocation Order* at && 34-36.

In addition to dark fiber, the Commission should make available as UNEs a full range of transport options including SONET rings. New entrants cannot offer competitive services except in very narrow geographic areas without access to ILEC transport networks because, as a matter of practicality and economics, they are not able to duplicate the ubiquitous nature of ILEC transport facilities. Therefore, further transport options should be available as UNEs. The Commission should establish as UNEs all transport options that are available under tariff.

VII. AUTOMATIC SUNSET PROVISIONS SHOULD NOT BE ADOPTED

Recognizing that changes in the marketplace and technology may affect the need for UNEs over time, the Commission has sought comment on whether sunset dates should be adopted for UNEs.[72] RCN acknowledges that as competition in local services reaches a mature stage, some UNEs may become widely available from sources other than ILECs thereby reducing the need to impose unbundling. Also, technological innovation may, over time, create competitive substitutes for some UNEs. These developments, however, are notoriously difficult to predict, as evidenced by the fact that competition in local services has, by any measure, significantly lagged the predictions of experts.[73] The Commission is no more clairvoyant than other industry observers and should not set arbitrary sunset dates or other automatic triggers for removing network elements from the unbundling obligation of section 251(c)(3).

Establishing preset expiration or sunset dates for UNEs or other automatic triggers risks premature removal of UNEs that could deter new entrants and stifle nascent local competition. Moreover, the establishment of UNE sunset dates would undermine the ILEC=s incentives to comply with the Commission=s unbundling requirements, particularly as the sunset dates draw near.

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[72] *UNE NPRM* at && 36-40.

[73] The Commission estimates that the combined revenues of CLECs and competitive access providers amounted to only 1.6% of total local service revenues in 1997. Industry Analysis Division, Common Carrier Bureau, Federal Communications Commission, *Trends In Telephone Service*, found at <http://www.fcc.gov/gov/ccb/stats>, Table 9-1, (1999).

Establishing sunset dates or other automatic triggers is also inconsistent with the terms of the Act. Section 251(d)(2), as interpreted by the Supreme Court, requires a flexible analysis of multiple factors to determine whether ILECs are obliged to unbundle network elements.[74] Section 251(d)(2) contemplates that the Commission will make a reasoned assessment of the state of local competition prior to any affirmative decision to remove a network element from the unbundling obligation. This assessment cannot be delegated to the states because section 251(d)(2) clearly provides that the Commission shall make the determination. Additionally, Congress has included Asunset≅ provisions in other sections of the Act; and their absence with respect to the unbundling obligation indicates that the Commission has no authority to set sunset dates for UNEs.

A superior approach to assessing the evolving need for UNEs would be for the Commission to undertake periodic reviews of the national list of UNEs based upon a record generated from industry comments. The periodic review would apply the factors adopted in this proceeding to elucidate section 251(d)(2).

[74] *Iowa Utilities Board*, 119 S.Ct. at 735-736.

VIII. CONCLUSION

For the foregoing reasons, the Commission should adopt the recommendations in these comments.

Respectfully Submitted,

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